

What is claimed is:

1. A method of manufacturing a center electrode for a spark plug, comprising the steps of:

5 press-fitting a core member into a metal cup, the metal cup being formed in a hollow cylinder with one end closed, the core member being made of metal having a higher thermal conductivity than the metal cup; and

 thereafter, performing a cold-forging process to form a small-diameter portion at the closed end of the metal cup.

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2. The method according to claim 1, wherein the core member is made of copper.

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3. The method according to claim 2, before the press-fitting step, further comprising the step of cutting a continuous copper wire into individual copper pieces each forming the core member.

4. The method according to claim 1, wherein the metal cup is made of nickel-base alloy.

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5. The method according to claim 3, after the cutting step and before the press-fitting step, further comprising the step of removing a rough edge or burr from opposite cut end faces of the core member.

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6. The method according to claim 5, wherein the removing step is carried out by an upsetting process in which the opposite cut end faces of the core member are punched or hammered.

7. The method according to claim 1, before the press-fitting step, further comprising the step of removing a rough edge or burr from the core member.

5 8. The method according to claim 7, wherein the removing step is carried out by an upsetting process in which opposite end faces of the core member are punched or hammered.

9. The method according to claim 1, wherein the press-fitting step is carried
10 out without using oil.

10. The method according to claim 3, wherein the cutting step is carried out without using oil.

15 11. The method according to claim 5, wherein the removing step is carried out without using oil.

12. The method according to claim 7, wherein the removing step is carried out without using oil.

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